

Claims:

1. A pressure sensor comprising pressure sensing means for detecting a deformation due to an external force and a sensor accommodation body which is made from a thermoplastic elastomer and which covers an outside of the pressure sensing means, wherein at least one end portion of the sensor accommodation body is sealed off through a thermal treatment.
2. A pressure sensor as set forth in Claim 1, wherein the pressure sensing means comprises a plurality of electrodes which an output signal generated due to deformation is made to leave and a resistor provided portion where a resistor for detecting a disconnection or short-circuit of the electrode is provided, and wherein the resistor provided portion is fixedly sealed off through a thermal treatment at the one end portion of the sensor accommodation body.
3. A pressure sensor as set forth in Claim 2, wherein the resistor provided portion includes at least one of a recessed portion, a raised portion and a wedge-shaped portion which function to enhance the fixing strength of the resistor provided portion when sealing off the end portion of the sensor accommodation body.
4. A pressure sensor as set forth in Claim 2, wherein the resistor provided portion comprises an insertion hole into which a pin is inserted for enhancing the fixing strength to the sensor accommodation body.
5. A pressure sensor as set forth in any of Claims 1 to 4, wherein at least one end portion of the pressure sensing means is covered by a cap made from a thermoplastic elastomer, and wherein the cap seals off the end portion of the sensor accommodation body.
6. A pressure sensor as set forth in any of Claims 1 to 5, wherein the sensor accommodation body is support means for the pressure sensing means which is secured to a side where the sensor is mounted and fixed, wherein the support means comprises a hollow portion which enhances the deformation of the pressure sensing means when an external force is applied, and wherein the hollow portion is sealed off through a thermal treatment at at least one end portion of the support means.
7. A pressure sensor as set forth in any of Claims 1 to 5, wherein the sensor accommodation body comprises support means which is covering means for covering the pressure sensing means, which incorporates therein the pressure sensing means covered by

the covering means and which is secured to a side where the sensor is mounted and fixed, wherein the support means comprises a hollow portion which enhances the deformation of the pressure sensing means when an external force is applied, and wherein the hollow portion is sealed off through a thermal treatment at at least one end portion of the support
5 means.

8. A pressure sensor as set forth in Claim 7, wherein the whole of at least one end portion of the support means is covered by a cap made from a thermoplastic elastomer, and wherein the cap seals off the end portion when subjected to a thermal treatment.

10 9. A pressure sensor as set forth in any of Claims 1 to 8, wherein the pressure sensing means is formed using a composite piezoelectric material resulting from a mixture of chlorinated polyethylene and piezoelectric ceramic powder.

10 10. A pressure sensor comprising pressure sensing means for detecting a deformation due to an external force and a sensor accommodation body which covers an
15 outside of the pressure sensing means, wherein a lubricant is loaded between the pressure sensing means and the sensor accommodation body.

11. A pressure sensor as set forth in Claim 10, wherein at least one end portion of the sensor accommodation body is sealed off through a thermal treatment.

20 12. An object detecting system comprising the pressure sensor set forth in any of Claims 1 to 11 and determination means for determining on the contact of an object based on an output signal of the pressure sensor.

13. An object detecting system as set forth in Claim 12, wherein the determination means is fixedly sealed off through a thermal treatment at one end portion of support means.

25 14. An opening and closing system comprising the object detecting system set forth in Claim 12 or 13, driving means for driving an opening and closing portion and control means for controlling the driving means in such a manner as to stop a closing operation of the opening and closing portion or to operate the opening and closing portion to be opened when determination means determines on the contact of an object with a
30 pressure sensor when the opening and closing portion is operated to be closed.

15. A pressure sensor fabricating method comprising pressure sensing means for detecting a deformation due to an external force and a sensor accommodation

body which covers an outside of the pressure sensing means, the pressure sensor fabricating method including the steps of making a lubricant adhere to at least either a surface of the pressure sensing means or an internal surface of the sensor accommodation body and inserting the pressure sensing means into the interior surface of the sensor accommodation body.

5 16. A pressure sensor fabricating method as set forth in Claim 15, wherein at least one end portion of the sensor accommodation body is sealed off through a thermal treatment after the insertion of the pressure sensing means into the sensor accommodation body.

10 17. A pressure sensor fabricating method as set forth in Claim 15 or 16, wherein either zinc stearate or calcium carbonate is used as the lubricant.